REMARKS

This Amendment in an RCE is filed in response to the Final Office Action of July 9, 2008 in which claims 1, 2, 4-9, 11, 37, 43-46 and 48-56 were rejected.

I. Amendments

The following amendments have been performed:

- Independent claim 1 has been amended based on the features of claims 46, 19 and 27.
- Independent sender claim 45 and independent receiver claim 46 have also been limited by the features of claims 19 and 27. Furthermore, these claims have been recast as independent "apparatus" claims, and their dependent claims have been adapted accordingly.
- Dependent claim 2 has been adapted to the changes in claim 1.
- Dependent claims 11, 52 and 55 have been cancelled.
- System claims 44 and 48-50 have been cancelled.
- A set of dependent claims 57-62 has been added for independent apparatus claim 46, based on the disclosure of dependent claims 2-8.
- Dependent claims 63, 65, 67 and 68 have been added based on the disclosure on page 39, second paragraph.
- An independent method claim 64 has been added corresponding to independent sender claim 46.
- A computer-readable storage medium claim has been added for independent method claim 64.
- Independent means-plus-function language claims 69 and 70 have been added, corresponding to independent apparatus claims 45 and 46.

II. Subject matter of the invention

The amended independent claims relate to starting a repair session. A backoff-mode attribute is received. The backoff-mode attribute specifies a backoff mode that provides information on when at least one receiver that did not correctly receive common data sent from a sender to a plurality of receivers in a transmission session can start a request for a repair session. In the repair session, at least parts of the common data are transmitted from a repair server to the at least one receiver requesting the repair session. The amended

independent claims further relate to starting a request for the repair session according to the backoff mode specified by the backoff-mode attribute.

III. Prior art

RFC 2327 – SDP: Session Description Protocol, April 1998 (Handley et al)

This document defines the SDP. SDP is intended for describing multimedia sessions for the purposes of session announcement, session invitation, and other forms of multimedia session initiation.

US 6,745,364 (Bhatt et al)

Bhatt et al inter alia discloses to send an RTP data stream and an RTP FEC stream from a sending device 302 (see Fig. 3) to a receiving device and to inform the receiving device via SDP elements on the relative URL for the FEC stream and on the FEC payload format.

US 2004/0078624 (Maxemchuk et al)

Maxemchuk et al relates to a system and method for the repair of IP multicast sessions. A network includes a source of multicast packets in a multicast session and a plurality of multicast recipients. The repair server provides the packets it receives to the recipients. The repair server includes a missing packet detector. There is a plurality of retransmit servers in the network buffering portions of the packets they respectively receive during the session. The repair server maintains an ordered list of the retransmit servers that are most likely to have buffered copies of packets missing from the session. When the repair server detects that there are packets missing from the session it received, it uses the ordered list to sequentially request the missing packets from respective ones of the plurality of retransmit servers (see the abstract and paragraphs [0010-0015]).

IV. Novelty and inventiveness of the amended independent claims

In Applicants' view, none of the cited prior art documents anticipate or render obvious the subject matter of the amended independent claims.

Handley et al only discloses transmission of data packets from a sender to a plurality of receivers in a multicast session, but completely fails to disclose a repair session.

Similarly, also *Bhatt et al* fails to disclose a repair session, since *Bhatt* is focussed on forward error correction to allow correction of erroneously transmitted data packets to avoid retransmission.

Maxemchuk et al discloses transmission of data packets from a sender to a plurality of receivers, and also discloses the presence of a repair server. However, the focus in *Maxemchuk et al* is different. *Maxemchuk et al* proposes to deploy a repair server as a kind of sniffing device between the sender and the plurality of receivers. The receivers can select, via different multicast addresses, either a normal session, in which data packets are provided by a multicast source without repair functionality, or a repair session, in which the data packets also stem from the multicast source, but are provided via the repair server which automatically tries to fetch lost packets from the retransmit servers and to provide them to the plurality of receivers (see paragraph [0013]). Thus the repair server improves the multicast data transmission as a network supplied service, and neither the source nor the receivers see any change (see paragraph [0012]).

With respect to the features of the amended independent claims, it is noted that *Maxemchuk et al*, due to its different focus, does not disclose that the receivers request a repair session in case that they did not receive common data sent from a sender to a plurality of receivers. In *Maxemchuk et al*, a receiver either subscribes to a normal transmission session, or to a network-enhanced so-called "repair session", which is however not directed to re-transmission of corrupted or lost data packets only, but to transmission of all (original and re-transmitted) data packets.

Furthermore, since there are no requests of receivers for a repair session, *Maxemchuk et al* is absolutely silent about the timing of such requests. In particular, *Maxemchuk et al* does not disclose to send a backoff-mode attribute that provides information on when the receivers that did not correctly receive common data sent from the sender can start a request for a repair session.

According to the present invention as expressed by the amended independent claims, the feature that the backoff-mode specifies when the receivers can start a request for a repair session serves the purpose to avoid network congestion by a large number of receivers concurrently requesting a repair session (which is likely to occur since packet losses or delays in network nodes are likely to affect large groups of receivers of a multicast session). In a preferred embodiment of the present invention, which is claimed in dependent claims 63, 65, 67 and 68, the backoff-mode attribute provides information on an interval in which said receivers can start the request for the repair session randomized with uniform distribution.

As a final remark, it is noted that even when considering the repair server of *Maxemchuk et al* as a "receiver" according to the claim language, *Maxemchuk et al* still fails to disclose that the repair server would receive a backoff-mode attribute with information on when to start a request for a repair session. The ordered list of retransmit servers maintained by the repair server is not received by the repair server, but assembled by the repair server itself. Furthermore, this ordered list may only be considered to provide information on the order in which retransmit servers are polled by the repair server, but does not provide information on when such polling should start. In particular, there is no information provided on the timing of the initial request for a repair session, which is however necessitated by the amended independent claims due to the use of the wording "can start a request for a repair session".

The amended independent claims are thus believed to be novel and inventive.

The objections and rejections of the Office Action of July 9, 2008, having been obviated by amendment or shown to be inapplicable, withdrawal thereof is requested and passage of amended claims 1-2, 4-9, 37, 43, 45-46, 51, 53-54 and 56-70 to issue, is earnestly solicited.

Respectfully submitted,

Francis J. Maguire
Attorney for the Applicant
Registration No. 31,391

FJM/mo
WARE, FRESSOLA, VAN DER SLUYS
& ADOLPHSON LLP
755 Main Street, P.O. Box 224
Monroe, Connecticut 06468
(203) 261-1234